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tion between them of interstitial matter, and also by the cleavage of the latter and the consequent multiplication of the granules. This peripheral growth of the cells is totally different from the mode of growth described by Schwann, and explains the disappearance of the nucleus in the scales of the epidermis. The observations of the author lead him to believe that the same process of development and of growth is followed in the epithelium as in the epidermis; and he offers evidence, showing that similar arrangements take place in the cells of melanosis, in the pigment cells of the choroid membrane of the eye, and in those of the skin of the negro.

“On the Temperature of Man.” By John Davy, M.D., F.R.S. L. & E.

Having in a former paper shown that, contrary to a commonly received opinion, the temperature of the human body, as measured by a thermometer placed under the tongue, is not a constant one, the author has resumed the inquiry, and gives, in the present paper, the results of numerous observations made with a particular instrument constructed for the purpose, admitting of minute accuracy (each degree of the scale being divided into ten parts), and when used with the precautions pointed out, affording satisfactory indications in many problems which may be proposed relative to the temperature of man, &c., and confines himself to a small number, offering the information he brings forward only as a preliminary contribution in aid of their solution.

The paper is divided into seven sections.

The first treats of variations of temperature during the twenty-four hours. The author finds from his observations, that the temperature is highest in the morning, on rising after sleep; that it continues high, but fluctuating, till the evening; and that it is lowest about midnight, ranging on an average from 98·7 to 97·9.

The second, of variations during the different seasons. These, he finds, bear some relation to the temperature of the air, but less than might be expected; which he attributes to the majority of the observations having been made within doors, under circumstances peculiarly favourable to uniformity.

The third, of the influence of active exercise on the temperature. The effect of this, when not carried to the length of exhausting fatigue, he finds to be elevating; and that the augmentation is, within a certain limit, proportional to the degree of muscular exertion.

The fourth, of passive, such as carriage exercise. The effect of this in a cool air, contrary to that of quick walking or riding, would appear to be lowering.

The fifth, of abstinence from all exercise in a cold atmosphere. This he finds to be depressing in a still greater degree; sitting in a cold church has occasioned a reduction of temperature from 1° to 2°, the air of the church being from 42° to 32°.

The sixth, of sustained attention or exertion of mind. This would appear to have the effect of raising the temperature, but in a much less degree than bodily exercise.

The seventh, of taking food. It would appear that a light meal, such as breakfast, alters very little the temperature, whilst a heavy meal, such as dinner with wine, tends to lower it.

The conclusion drawn by the author from his observations, considered in their greatest generality, is, that the temperature of man is constantly fluctuating within a certain limit; regularly during the twenty-four hours; and irregularly according to the operation of certain disturbing circumstances.

Should multiplied observations give similar results, he infers that they will admit of many applications, both as regards the regulation of clothing, the warming of apartments, and possibly the prevention and cure of diseases,—conducive alike to increase of comforts and health.

Tables are appended, containing a series of observations extending through eight months, in which not only the temperature of the body is noticed, but also the frequency of the pulse and of respiration, and the temperature of the air.

“On Ozone.” By C. F. Schœnbein, Professor of Chemistry at Basle, in a letter to Michael Faraday, Esq., D.C.L., F.R.S. Communicated by Michael Faraday, Esq.

The author finds that the peculiar substance he has denominated *ozone*, and which, reverting to the opinion he originally entertained, he now believes to be a compound of oxygen and hydrogen, is obtained readily and in great abundance by placing phosphorus in immediate contact with water and atmospheric air at a temperature of about 30° Cent., but that none is produced when water is absent. Heat was found to effect the decomposition of ozone. He infers, both from his own experiments and those of M. Marignac, that the presence of nitrogen, instead of being essential to the formation of ozone, as he formerly believed, does not in reality contribute in any way to the production of that substance.

“On the Theory of Vision,” in a letter to S. Hunter Christie, Esq., Sec. R.S. By William Ford Stevenson, Esq., F.R.S.

The author adduces two experiments, of placing before the eye an object, the ends of which are marked, in a vertical position, as “clearly demonstrating that objects are not presented to the mind as they are found upon the retina, but in the actual position in which they are placed before the spectator.”

“On the Compounds of Tin and Iodine.” By Thomas H. Henry, Esq. Communicated by Richard Phillips, Esq., F.R.S.

Different properties have been assigned by different authors (as Sir Humphry Davy, Gay-Lussac, Boullay and Rammelsberg) to a combination of tin with iodine. With a view to explain these discordances, the author instituted the series of experiments detailed in this paper, and which have led him to the conclusion that the substance obtained by heating tin with twice its weight of iodine is a mixture of two salts, differing from each other in their composition.